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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,270	05/25/2006	Hiroyuki Takebe	1254-0314PUS1	5965

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EXAMINER

HSIEH, PING Y

ART UNIT	PAPER NUMBER
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2618

NOTIFICATION DATE	DELIVERY MODE
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07/23/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/580,270	Applicant(s) TAKEBE, HIROYUKI	
	Examiner PING Y. HSIEH	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-13, 19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-13, 19 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-8, 10-13, 19 and 20 are pending.

Claims 9 and 14-18 are cancelled.

Response to Amendment

1. In view of the amendment received on 5/28/08, the rejection under 35 U.S.C. 112 to claim 10 is withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1, 2, 3, 11-13 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda (U.S. PATENT NO. 7,269,440) in view of Ono et al. (U.S. PG-PUB NO. 2001/0044320).

-Regarding claim 1, Ueda discloses a folding cellular wireless unit (**as disclosed in fig. 4-6**) comprising a first casing containing a first circuit member

(**first printed substrate 37a, fig. 6**), a second casing containing a second circuit member (**second printed substrate 37b, fig. 6**), an antenna disposed at one end of said first casing (**antenna 36, fig. 6**), and a hinge portion via which the other end of said first casing and one end of said second casing are connected such that said first casing and said second casing can be rotated relative to each other in a hinged manner (**hinge 33 as disclosed in fig. 4 and further disclosed in col. 7 lines 43-52**), said folding cellular wireless unit further comprising: a first connecting conductor connected to said first circuit member at said other end thereof (**the base contact 61 as disclosed in fig. 6 and further disclosed in col. 8 lines 29-37**), and a second connecting conductor connected to said second circuit member at said one end thereof (**the base contact 71 as disclosed in fig. 6 and further disclosed in col. 8 lines 38-46**), wherein said first connecting conductor and said second connecting conductor are disposed at least partly opposite to each other at a certain interval (**as disclosed in fig. 6**). However, Ueda fails to disclose the normal direction of both said one plane of said first connecting conductor and said one plane of said second connecting conductor are substantially parallel to the direction in which said hinge portion extends.

Ono et al. disclose the normal direction of both one plane of a first connecting conductor (**plane of the first ring shaft 261 shown in fig. 7**) and one plane of a second connecting conductor (**plane of the second ring shaft 266 shown in fig. 7**) are substantially parallel to the direction in which the hinge

portion extends **(the normal direction of the plane of the first ring shaft 261 shown in fig. 7 and the normal direction of the plane of the second ring shaft 266 shown in fig. 7 are parallel to the direction in which the center shaft 262 extends as disclosed in fig. 7 and further disclosed in paragraph 51).**

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify the cable 47 as disclosed by Ueda to be replaced with the first ring shaft 261, the second ring shaft 266 and the center shaft 262 as disclosed by Ono et al. One is motivated as such in order to provide a wireless apparatus having a foldable structure allowing improved antenna condition when the terminal is opened.

-Regarding claim 2, the combination further discloses a magnetic member disposed in proximity to the electric connecting means between said first circuit member and said second circuit member **(Ueda, cable 47 as disclosed in fig. 6 and further disclosed in col. 8 lines 50-57).**

-Regarding claims 3 and 19, the combination further discloses said planes of said first and said second connecting conductors are disposed opposite to each other at said hinge portion **(Ono et al., as disclosed in fig. 7 and further disclosed in paragraph 51).**

-Regarding claim 11, Ueda discloses a rotary cellular wireless unit **(as disclosed in fig. 4-6)** comprising a first casing containing a first circuit member **(first printed substrate 37a, fig. 6)**, a second casing containing a second circuit

member **(second printed substrate 37b, fig. 6)**, an antenna disposed on one end of said first casing **(antenna 36, fig. 6)**, and a connecting portion via which the other end of said first casing and one end of said second casing are connected **(cable 47 as disclosed in fig. 6 and further disclosed in col. 8 lines 50-57)** such that said first and said second casings are rotatable while they maintain a substantially parallel relationship **(as disclosed in fig. 4-6)**, said cellular wireless unit further comprising: a first connecting conductor connected to said first circuit member at said other end thereof **(the base contact 61 as disclosed in fig. 6 and further disclosed in col. 8 lines 29-37)**, and a second connecting conductor connected to said second circuit member at said one end thereof **(the base contact 71 as disclosed in fig. 6 and further disclosed in col. 8 lines 38-46)**, wherein said first connecting conductor and said second connecting conductor are disposed at least partly opposite to each other at a certain interval **(as disclosed in fig. 6)**. However, Ueda fails to disclose the normal direction of both said one plane of said first connecting conductor and said one plane of said second connecting conductor are substantially parallel to the direction in which said hinge portion extends.

Ono et al. disclose the normal direction of both one plane of a first connecting conductor **(plane of the first ring shaft 261 shown in fig. 7)** and one plane of a second connecting conductor **(plane of the second ring shaft 266 shown in fig. 7)** are substantially parallel to the direction in which the hinge portion extends **(the normal direction of the plane of the first ring shaft 261**

shown in fig. 7 and the normal direction of the plane of the second ring shaft 266 shown in fig. 7 are parallel to the direction in which the center shaft 262 extends as disclosed in fig. 7 and further disclosed in paragraph 51).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify the cable 47 as disclosed by Ueda to be replaced with the first ring shaft 261, the second ring shaft 266 and the center shaft 262 as disclosed by Ono et al. One is motivated as such in order to provide a wireless apparatus having a foldable structure allowing improved antenna condition when the terminal is opened.

-Regarding claim 12, the combination further discloses the area of one plane of said first connecting conductor and one plane of said second connecting conductor which is disposed at least partly opposite to each other at a certain interval varies depending on the rotation **(Ono et al., as disclosed in fig. 7 and further disclosed in paragraph 51).**

-Regarding claim 13, the combination further discloses as said casings are rotated relative to each other in a hinged manner **(Ueda, first and second bodies 37a and 37b are foldable about the hinge 33 as disclosed in fig. 6 and further disclosed in col. 10 lines 21-26)**, the effective casing length relative to said antenna is adjusted in a direction such that the drop of antenna efficiency is prevented **(Ueda, ground length L1 and L2 as disclosed in fig. 6 and further disclosed in col. 10 lines 7-34).**

5. Claims 4-8, 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda (U.S. PATENT NO. 7,269,440) in view of Ono et al. (U.S. PG-PUB NO. 2001/0044320) and further in view of Desclos et al. (U.S. PATENT NO. 7,310,536).

-Regarding claim 4, the combination of Ueda and Ono et al. discloses all the limitations as claimed in claim 1. However, the combination fails to disclose an insulator is disposed between said one plane of said first connecting conductor and said one plane of second connecting conductor.

Desclos et al. disclose an insulator is disposed between said one plane of said first connecting conductor and said one plane of second connecting conductor **(coupling portions 20c and 20d are electrically isolated from the hinge 23 and portions 20c and 20d are disposed about hinge 23 such that portions 20c and 20d are linearly separated by a distance that defines a gap as disclosed in fig. 5a-5c and further disclosed in col. 6 lines 54-60).**

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify the hinge portion as disclosed by Ueda and Ono et al. to include an insulator in between as disclosed by Desclos et al. One is motivated as such in order to reduce the loading and degradation of signals received or sent by the antenna.

-Regarding claims 5 and 20, the combination further discloses said first connecting conductor and said connecting conductor have an at least partly ring-

shape portion having an opening in which a pin constituting said hinge portion is inserted **(Desclos et al., as disclosed in fig. 5a-5c; and Ono et al., as disclosed in fig. 7 and further disclosed in paragraph 51).**

-Regarding claim 6, the combination further discloses said first and said second connecting conductors are disposed at both ends of said hinge portion **(Desclos et al., as disclosed in fig. 5a-5c).**

-Regarding claim 7, the combination further discloses the connecting conductors are opposed to each other at different intervals at said ends **(Desclos et al., as disclosed in fig. 5a-5c).**

-Regarding claim 8, the combination further discloses the connecting conductors are opposed to each other with different areas at said ends **(Ono et al., as disclosed in fig. 7 and further disclosed in paragraph 51).**

-Regarding claim 10, the combination further discloses the area with which said one plane of said first connecting conductor and the one plane of said second connecting conductor that is disposed at least partly opposite to each other at a certain interval varies depending on the positional relationship between said first casing and said second casing **(Ono et al., as disclosed in fig. 7 and further disclosed in paragraph 51).**

Response to Arguments

6. Applicant's arguments with respect to claims 1, 10 and 11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PING Y. HSIEH whose telephone number is (571)270-3011. The examiner can normally be reached on Monday-Thursday (alternate Fridays) 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yuwen Pan can be reached on 571-272-7855. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. Y. H./
Examiner, Art Unit 2618

/Yuwen Pan/
Primary Examiner, Art Unit 2618